

On/off valves MS-EDE-B

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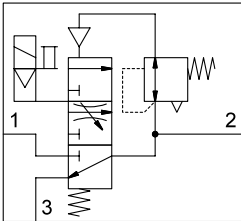
Key features

At a glance

Very compact and extremely lightweight series for use close to the process directly in the machine.

- Grid dimension 40 mm
- With solenoid coil, without plug socket
- Supply voltage: 24 V DC

Function



- Electrically actuated soft-start valve for slow pressurisation and exhaust of pneumatic installations
- The drives move slowly and reliably into the initial position
- Sudden and erratic movements are avoided
- Adjustable switching time delay
- Detenting and non-detenting manual override

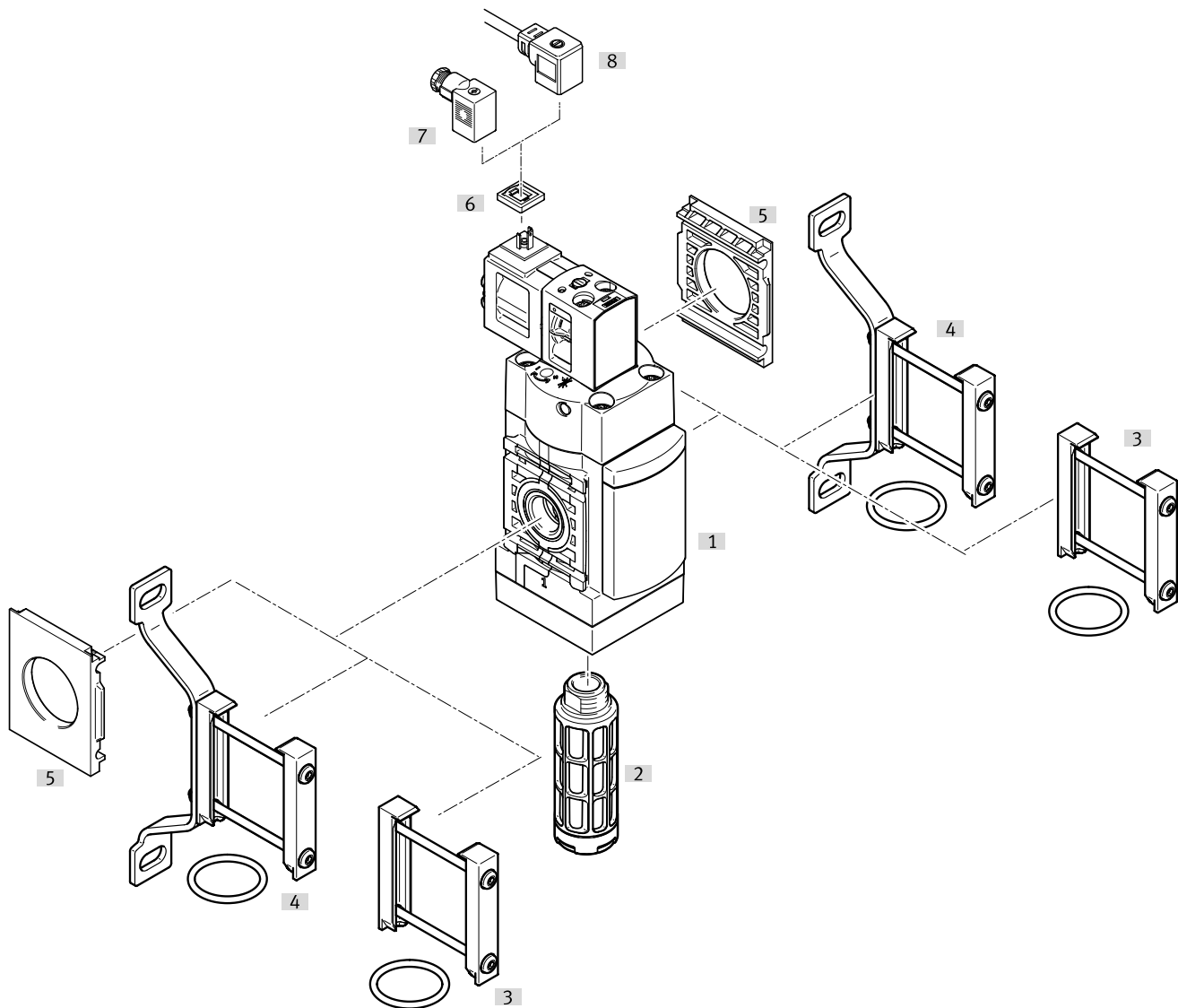
Pneumatic connection

Individual fittings which are mounted via a female thread

Type codes

| | | | |
|------------|---|------------|---|
| 001 | Series | 004 | Pneumatic connection |
| MS | MS series | 1/4 | Female thread G1/4 |
| 002 | Size | 005 | Supply voltage |
| 4 | Grid dimension 40 mm | V24 | 24 V DC (connection pattern to EN 175301) |
| 003 | Function | 006 | Version |
| EDE | Soft-start valve, electrically actuated | B | Basic |

Peripherals overview



| Mounting attachments and accessories | | → Page/Internet |
|--------------------------------------|--------------------------------------|--|
| [1] | On/off valve MS4-EDE-...-B | 5 |
| [2] | Silencer U | 10 |
| [3] | Module connector MS4-MV1 | For connecting the modules 10 |
| [4] | Wall mounting kit MS4-WPE-B | For connecting the modules for wall mounting 10 |
| [5] | Mounting plate AEND ¹⁾ | 10 |
| [6] | Illuminating seal MEB-LD | 10 |
| [7] | Plug socket MSSD-EB | 10 |
| [8] | Plug socket with cable KMEB | 10 |

1) Only necessary for individual mounting. Mounting bracket MS4-WPE-B [4] is required for mounting.

Datasheet

| General technical data | |
|------------------------|-------------------------------------|
| Size | 4 |
| Pneumatic connection 1 | G1/4 |
| Pneumatic connection 2 | G1/4 |
| Pneumatic connection 3 | G1/4 |
| Design | Poppet valve, electrically actuated |
| Type of mounting | Via wall/surface bracket |
| Mounting position | Vertical +/-5° |
| Valve function | 3/2-way, closed, single solenoid |
| Exhaust function | Cannot be throttled |
| Manual override | Non-detenting and detenting |
| Actuation type | Electrical |
| Reset method | Mechanical spring |
| Type of control | Piloted |
| Pilot air supply | Internal |
| Signal status display | With accessories |

| Electrical data | |
|---------------------------------|--------------------------|
| Characteristic coil data | 24 V DC: 3.0 W |
| Permissible voltage fluctuation | +/- 10% |
| Electrical connection | Type C, to EN 175301-803 |
| Degree of protection | IP65 |
| Switch-on time | 31 ms |

| Characteristic flow rate values | |
|---|-------------|
| Size | 4 |
| Standard nominal flow rate ¹⁾ | 2000 l/min |
| Standard flow rate, exhaust ²⁾ | 1600 l/min |
| C value | 8.52 l/sbar |
| b value | 0.45 |

1.) Measured at p₁ = 6 bar and p₂ = 5 bar, Δp = 1 bar.

2.) Measured at p₁ = 6 bar and p₂ = 0 bar, Δp = 6 bar.

| Operating and environmental conditions | |
|--|---|
| Operating pressure (MPa) | 0.3 ... 0.7 MPa |
| Operating pressure (bar) | 3 ... 7 bar |
| Operating medium | Compressed air to ISO 8573-1:2010 [7:4:4] |
| PWIS conformity | VDMA24364-B1/B2-L |
| Storage temperature | -10 ... 60°C |
| Ambient temperature | -5 ... 50°C |
| Temperature of medium | -5 ... 50°C |
| Corrosion resistance class CRC ¹⁾ | 1 - Low corrosion stress |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070. Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts which are covered in the application (e.g. drive trunnions).

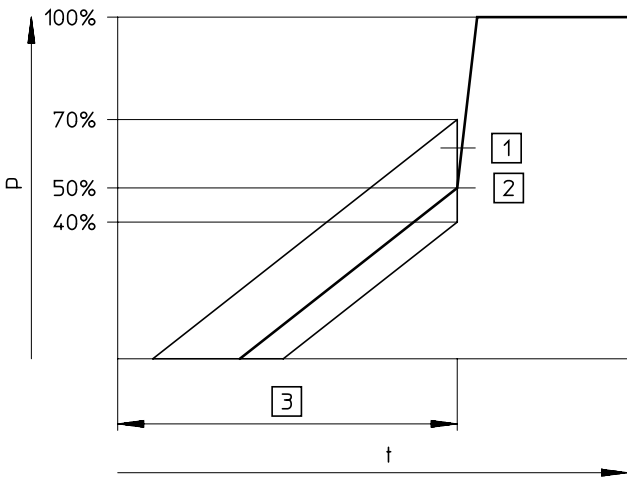
| Weight | |
|----------------|-------|
| Size | 4 |
| Product weight | 196 g |

| Materials | |
|-------------------|----------------|
| Housing material | Reinforced PA |
| Sealing material | HNBR, NBR |
| Note on materials | RoHS-compliant |

Datasheet

Switching pressure

Pressure p as a function of time t

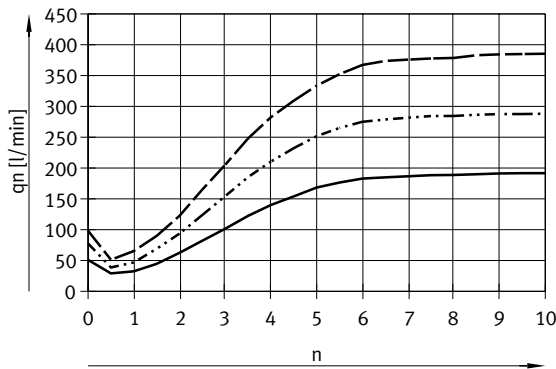


- [1] Tolerance range
- [2] Switching point
- [3] Filling time is adjustable via a restrictor

Note
 The +20%/–10% switching pressure tolerance refers to the operating pressure p_1 .
 Example: a switching pressure from 1.6 bar to 2.8 bar is permissible at an operating pressure of 4 bar.

Flow rate q_n as a function of flow control screw revolutions n

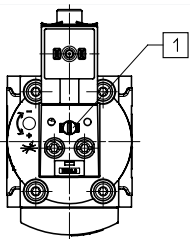
Characteristic flow-control curves MS4-EDE-B¹⁾



- $p_1 = 3$ bar
- ⋯ $p_1 = 5$ bar
- - - $p_1 = 7$ bar

1) Measured: P1 against ambient pressure

Manual override

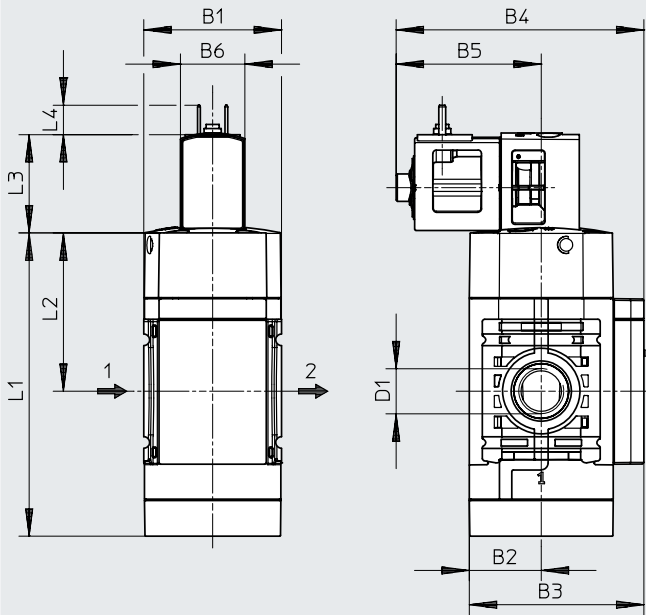


- [1] Detenting and non-detenting manual override

Datasheet

Dimensions – Basic version

Download CAD data → www.festo.com



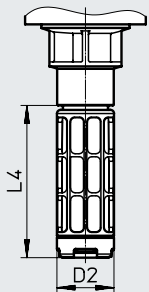
[1] Plug connection to EN 175301-803

→ Flow direction

| Type | B1 | B2 | B3 | B4 | B5 | B6 | D1 | L1 | L2 | L3 | L4 |
|--------------|------|----|------|------|------|------|------|------|------|------|-----|
| MS4-EE-...-B | 40.2 | 21 | 50.9 | 72.3 | 42.4 | 18.8 | G1/4 | 88.5 | 46.2 | 28.7 | 8.6 |

Dimensions – Silencer (accessories)

Download CAD data → www.festo.com



| Type | D2 Ø | L4 |
|-------|---------|----|
| U-1/4 | 20 | 55 |

Datasheet

★ Core Range

Ordering data

Pneumatic connection 1

Part no.

Type

G1/4

★ 8080815

MS4-EDE-1/4-V24-B

Accessories

**Wall mounting kit
MS...-WPE-B**

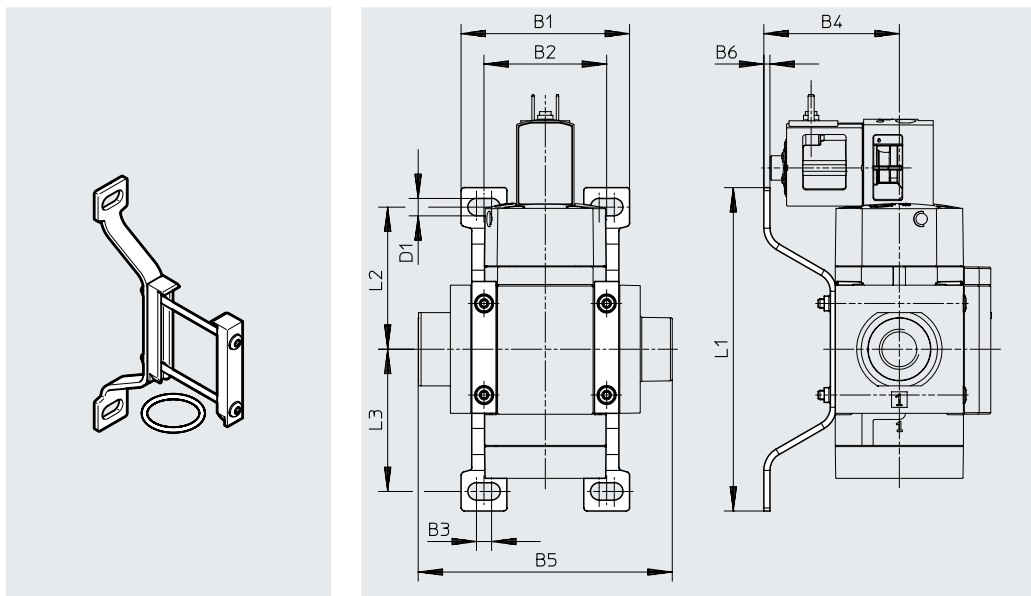
For size 4

- For wall mounting

Materials:

Steel

RoHS-compliant

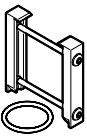


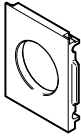
Dimensions and ordering data


| Size | B1 | B2 | B3 | B4 | B5 | B6 | D1 ∅ | L1 | L2 | L3 | Weight [g] | Part no. | Type |
|------|------|------|----|------|------|----|---------|-----|------|------|---------------|----------------|------------------|
| 4 | 55.2 | 40.2 | 5 | 44.4 | 83.3 | 2 | 5.7 | 106 | 46.6 | 46.6 | 30 | 8118600 | MS4-WPE-B |

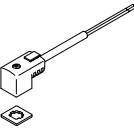
Accessories


★ Core Range

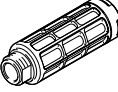
| Ordering data – Module connector MS...-MV1 | | | | |
|--|------|--|----------|---------|
| | Size | Description | Part no. | Type |
|  | 4 | For connecting the modules for wall mounting | 8119201 | MS4-MV1 |

| Ordering data – Mounting plate MS...-AEND | | | | |
|--|------|--|----------|----------|
| | Size | Description | Part no. | Type |
|  | 4 | In combination with mounting bracket MS...-WPE-B for wall mounting an individual component | 542966 | MS4-AEND |

| Ordering data – Plug socket MSSD | | | | |
|--|-----------------------|-----------------------------------|----------|---------------|
| | Electrical connection | Cable connection | Part no. | Type |
|  | 3-pin | Screw terminal | ★ 151687 | MSSD-EB |
| | 4-pin | Insulation displacement connector | 192745 | MSSD-EB-S-M14 |

| Ordering data – Plug socket with cable KMEB | | | | | | |
|--|-------------------|-----------------------|-----------------------------|------------------|-------------------|-------------------|
| | Operating voltage | Electrical connection | Switching status indication | Cable length [m] | Part no. | Type |
|  | 24 V DC | 2-pin | LED | 2.5 | 547268 | KMEB-3-24-2.5-LED |
| | | | | 5 | 547269 | KMEB-3-24-5-LED |
| | | - | 2.5 | 547270 | KMEB-3-24-2.5 | |
| | | | 5 | 547271 | KMEB-3-24-5 | |
| | 3-pin | LED | 2.5 | ★ 151688 | KMEB-1-24-2.5-LED | |
| | | | 5 | 151689 | KMEB-1-24-5-LED | |
| | | - | 2.5 | 193457 | KMEB-1-24-10-LED | |
| | | | 10 | | | |

| Ordering data – Illuminating seal MEB-LD | | | | | Datasheets → Internet: meb, mc |
|--|---|-------------------------|----------|----------------|--------------------------------|
| | Description | Operating voltage range | Part no. | Type | |
|  | For plug socket with cable KMEB and plug socket MSSD-EB | 12 ... 24 V DC | 151717 | MEB-LD-12-24DC | |

| Ordering data – Silencer U | | | | |
|--|----------------------|----------|-------|--|
| | Pneumatic connection | Part no. | Type | |
|  | G1/4 | 2316 | U-1/4 | |